



FINDING OF NO SIGNIFICANT IMPACT

North Rim Development Plan Grand Canyon National Park

Grand Canyon National Park proposes actions on the North Rim that will improve visitor orientation and interpretation, vehicle and non-vehicular circulation, employee housing, and the use of various buildings as part of a development plan for the North Rim. The boundary of the planning area includes National Park Service land along the State Highway 67 road corridor from the North Rim Entrance Station to Bright Angel peninsula and the developed areas on the peninsula.

The park initiated this development planning effort for the purposes of further refining direction outlined in the 1995 General Management Plan (GMP) for transit, visitor orientation/interpretation and structure utilization. North Rim management concerns identified in the GMP (page 44) include, but are not limited to, the following:

- Visitor information and regional orientation before visitors reach the park is inadequate.
- Many visitors favor the current low-key experience, but there is concern that this experience could be lost with increased visitation.
- Traffic flow is poor and signs are confusing in particular areas. There is not enough parking on Bright Angel Point.
- Orientation and information services are inadequate.

These concerns, as well as others, were the impetus for the GMP proposal for the North Rim, which includes the expansion of information services at the Kaibab Plateau Visitor Center at Jacob Lake, the development of a mandatory transit system and construction of a transit staging and orientation center on CC Hill. While some portions of GMP actions for the North Rim have been implemented, and many projects are currently underway that are consistent with this vision outlined in the GMP, other significant GMP direction related to transit, visitor orientation/interpretation and structure utilization remains to be initiated. The park began this North Rim development planning effort to provide a framework for focused analysis of these development needs and to assess environmental impacts before undertaking substantial program changes for the North Rim.

Needs that are specific to the areas of focus are described in detail on pages 3 – 6 of the *Environmental Assessment for the North Rim Development Plan* (June 2005).

Objectives of the Action

The development planning effort is guided by the GMP vision for the North Rim, specifically to provide a low-key, uncrowded atmosphere that offers visitors opportunities to be intimately involved with the environment. Specific objectives for the planning effort include:

1. Preserve the rustic character of the North Rim.
2. Improve distribution of visitor use on Bright Angel Peninsula.
3. Encourage visitor use of Walhalla Plateau.
4. Improve visitor orientation/information services outside the park through agency partnerships.
5. Improve visitor orientation and interpretation services within the park.
6. Improve pedestrian and vehicular circulation at Bright Angel Point.
7. Evaluate employee housing needs and the best use of existing structures, including those related to visitor facilities and support functions.

In June 2005 the National Park Service (NPS) prepared an *Environmental Assessment for the North Rim Development Plan*. This EA, in accordance with the National Environmental Policy Act, analyzes the impacts that will likely result from implementation of the project. The environmental assessment evaluated two alternatives in detail, Alternative A, the

No Action Alternative and Alternative B, the agency's preferred alternative. Several preliminary alternatives and components of alternatives were initially considered throughout the progression through alternative development and internal and external scoping. These preliminary alternatives are described on pages 18 – 24 of the EA and were dismissed from further detailed analysis in the EA.

PREFERRED ALTERNATIVE

Alternative B proposes a “light touch” approach to addressing the purpose and need for action and meeting the objectives of the project, focusing on improving existing facilities and services. These proposed actions are first listed in tabular format below so as to better understand the various actions proposed in each individual area and then described in more detail in the text. All actions relate to improving visitor orientation and interpretation, vehicular and non-vehicular circulation and visitor facilities and services. Actions are also proposed for employee housing and the use of various buildings. These actions (housing and structure utilization) are introduced below, and then described in detail within each focus area.

Development Plan Components

Component	Proposed Action
Entrance Station Area	
Orientation Kiosk	Install an unstaffed orientation kiosk just south of the entrance station with pull-out
CC Hill Area	
North Kaibab Trailhead Expansion	Expand the existing parking area by extending the paved surface on the northwest side by 11 – 12 feet. This will increase parking capacity by 15 cars and 2 oversized vehicles
Seasonal Employee Tent/Yurt Camp	Designate a 0.5 acre area in the existing administrative area as a seasonal employee/volunteer camping area. Establish portable toilets, 2 large tents and picnic tables, seasonally, as needed.
Headquarters Area	
Rehabilitate and retain buildings for current uses	3 buildings will be rehabilitated and retained for their existing use: <ul style="list-style-type: none"> • Historic dormitory (building 111) used as a trail crew bunkhouse. • Historic warehouse (building 118), used as an office and community building. Remove concrete porch and steps. • Historic shed (building 127) use as roads and trails shop. Remove both non-historic additions
Adaptive reuse of historic buildings	4 buildings will be rehabilitated and adaptively reused for new administration functions: <ul style="list-style-type: none"> • Rehabilitate and convert ranger offices (building 119) - north office to interpreter's office, south office to fee supervisory office. Explore options to increase interior office space layout by removing wall partitions • Rehabilitate and convert holding facility (building 125, gas and oil station) to interpreter's office space • Rehabilitate and convert fire equipment shed (building 126) to winter storage of vehicles. Remove non-historic rear addition • Rehabilitate and convert wildland fire cache (building 171, equipment shed) to maintenance office, meeting space, and storage space. Provide computer and phone lines.
Trailer court removal	Remove helibase and “Cochary” trailer courts and relocate employee housing to exposed frame cabins and Norton Court. Remove existing utilities and restore the

Component	Proposed Action
	sites.
Campground Area	
Rehabilitate and retain buildings for current uses	3 buildings will be retained for current functions <ul style="list-style-type: none"> Rehabilitate non-historic laundry/shower (building 1568) Rehabilitate employee laundry facility (building 923) (<i>this action was analyzed in previous EA (NPS 2003a)</i>) Maintain building 924 for current use as a storage facility
Rehabilitation and adaptive reuse of historic buildings	3 buildings will be rehabilitated and converted to new uses <ul style="list-style-type: none"> Rehabilitate building 925 and convert to seasonal housing Rehabilitate washroom building 922 and convert to community building (<i>this action was analyzed in previous EA (NPS 2003a)</i>) Rehabilitate log restroom (building 134) and continue use as storage; as funds become available, convert structure for interpretive display or other appropriate use
Retain Gas Station	Retain gas station (building 916) for current use.
Campground Registration Building	Combine use of campground registration building with backcountry permitting, once it is constructed
Concessionaire Area	
Auto Repair Shop	Rehabilitate and retain historic auto repair shop (building 963) for its current function. Explore the possibility of moving function to new emergency services complex.
Mule Barn Evaluation	Stabilize and retain mule barn (building 1098) for storage and isolation of sick animals. Evaluate historic significance and eligibility for National Register nomination.
Norton Trailer Court Expansion	Redesign and expand Norton trailer court 3- 5 acres in size to provide additional seasonal employee housing at a capacity of 34 spaces.
Lodge Area	
Improve Visitor Center Exhibits	Install additional permanent exhibits and media in the Visitor Center
Enhance Slide Programs	Implement both daytime and evening slide programs in Lodge auditorium; evaluate accessibility needs for use of this space.
Lodge Services and Facilities Under Consideration	Restore lobby to original configuration and relocate administrative offices (likely to motel basement); Remodel kitchen; Relocate the saloon function to the café and the café function to the saloon. Expand restrooms into the saloon area. Convert current accounting offices behind the saloon into café kitchen and relocate (likely to motel basement).
Visitor Lodging Conversions Under Consideration	Relocate employees housed in 9 Lodge cabins to the new dorm in the Concessionaire Area and convert these cabins back into visitor lodging Relocate employees housed in basement units of motel to the new dorm in the Concessionaire Area and convert these spaces into administrative use.
Lodge Road and Parking Area Reconfiguration	Reconfigure the existing parking area to accommodate bus parking and additional standard and oversized vehicle parking. This will increase the capacity by an additional 7 cars, 5 buses and 3 oversized vehicles, while eliminating 2 administrative spaces. Create a bus passenger drop off zone at the head of the Lodge entry road. Convert Lodge entry road into the main pedestrian corridor to the Lodge.

Component	Proposed Action
Throughout Bright Angel Peninsula	
Area trails	Consider the installation of additional signs and/or other interpretive information for area trails, including the proposed Greenway Trail.
Greenway Trail	Construct a multi-use, 8-foot wide trail between the North Kaibab Trailhead and Grand Canyon Lodge, using the alignment of the existing Bridle Trail. Pedestrian, bicycle and equestrian use will be allowed. A significant portion of the trail will meet accessibility standards.
Recommendations Outside Park Boundary	
Kaibab Plateau Visitor Center Area	NPS will continue cooperative efforts with the USFS and will consider the need for and feasibility of expanding the visitor center, addressing parking area problems, improving on existing 24-hour kiosk information and exploring options for additional road signage or new road configurations in this area, with ADOT.
Highway 67	In cooperation with the USFS and if deemed feasible, implement improvements to visitor orientation and interpretation, including such things as an auto tour and a traveler information system between Jacob Lake and the park boundary.

Structure Utilization and Housing: NPS identified eleven structures on the North Rim for evaluation of their potential for adaptive re-use. These structures are located within three of the development nodes on the Bright Angel peninsula: the NPS Headquarters area (Historic District), the Campground Area (North Rim Inn and Campground Historic District) and the Concessionaire Housing Area (non-historic area). NPS also performed a detailed evaluation of employee housing needs (both hospitality and trail rides concessionaire employees and NPS employees) as part of this developing planning effort. This analysis is described in detail in the North Rim Development Plan (in draft, NPS 2004); a document tiered to the environmental assessment. The housing analysis re-evaluated conclusions reached in two previous housing needs assessments (ARC 2000 and NPS 2002b), based on the most current information on existing and projected needs for the North Rim. This housing assessment revealed a shortfall of 6 permanent quarters, 5 seasonal bed spaces, and 16 trailer spaces.

The proposed strategies for accommodating these additional housing needs are described within each of the development focus areas they are proposed for, and are summarized in the table above. With the exception of the proposed RV park expansion, no new ground disturbance or tree removal will result from proposed actions under the category structure utilization and housing.

North Rim Entrance Station

Install an un-staffed orientation kiosk and pull-out south of the entrance station. The kiosk will provide information about the Walhalla Plateau to encourage visitors to travel the road to Cape Royal and Point Imperial, and provide other pertinent information on services and opportunities on Bright Angel peninsula. The kiosk will be located on the west side of the road, just south of the entrance station, to allow visitors to get oriented right at the park entrance. The site selected will minimize new ground disturbance and provide easy 24-hour access for visitors. The parallel parking pull-out will accommodate 2 to 3 standard size vehicles and one oversized vehicle and will be paved. Approximately 0.25 acres of ground disturbance will result, but no trees will need to be removed. The area is a meadow.

Kiosk and pull-out construction timing, duration and equipment staging – This aspect of the development plan is currently unfunded. It is uncertain when funding will become available, but the action is expected to be implemented in the next 2-4 years. Construction equipment, such as bull dozers, backhoes, pavers, and jackhammers, will be staged in the entrance station cabin area, an administrative use area. Once begun, construction is expected to take 4 – 6 weeks to fully complete and is not expected to result in any visitor delays in accessing the park. All mitigation measures (as listed in this document) related to minimizing impacts to park resources and visitors during construction will be adhered to.

CC Hill

North Kaibab Trailhead Parking Area Expansion – the parking capacity in this parking area will be increased by approximately 15 automobiles and two oversized vehicles by extending the paved surface on the northwest side by approximately 11 – 12 feet. By providing this additional width, head-in angled parking for 17 cars could be provided. The oversized parking currently provided on this side of the parking area will then shift to the southeast side and will be delineated through striping. To ensure enough width for the travel lanes, the center area striping will be shifted approximately 10 feet to the northwest. This proposal will result in less than 0.10 acres of ground disturbance and will not require the removal of any trees over 3 inches dbh.

Seasonal Work Camp - A seasonal work camp area will be designated in previously disturbed areas on CC Hill. The camp will be located in an existing clearing immediately northeast of Horse camp, an area available for visitors to camp with their horses. The area is approximately 0.5 acres in size and was previously used as a storage/dumpsite area that has since been cleaned up. The camp will be used in the summer season, on an as-needed basis, to provide a designated and consolidated camping area for NPS volunteers and other seasonal NPS employees on the North Rim, when conducting field work or to perform other assigned duties for short periods of time. The camp will only be set up when needed. Portable chemical toilets, picnic tables, a campfire ring, and 1-2 larger tents or yurt-style tents will typically be on site during the summer when in use. Piped water is already on site and will provide drinking water. There will be space for individual tents to be set up, but no tent pads will be necessary. It is anticipated that no more than 20 employees/volunteers will be on site at any one time, with a typical range of 10 – 12 people. Parking needs are minimal, as most groups typically arrive in multi-passenger vans or buses. No new ground disturbance or tree removal will occur. When not in use and during the off-season, the set-up (toilets, large tents/yurts) will be removed.

CC Hill area construction timing, duration and equipment staging – NPS anticipates that the development of the seasonal work camp will occur in summer/fall 2005. Due to the limited size of the seasonal work camp, its location in an existing disturbed area and the lack of permanent infrastructure, construction activity during establishment will be minimal. A small crew of NPS employees will likely be on site for 2- 5 days to set up tents/yurts, picnic tables and portable toilets. No construction equipment will be necessary. Some hand tools may be needed. It is expected that the seasonal camp will be set-up in the spring and dismantled in the fall, annually, and will require a small crew for this 2-5 day period for both tasks. All mitigation measures as listed at the end of this section will be adhered to so as to minimize potential impacts to park resources and visitors.

The timing of the expansion of the parking area is unknown as this time, and is dependent on available funding. Construction is expected in the next 2-5 years. Construction will be coordinated with the installation of vault toilets at this site and will take approximately 1 – 2 months to complete. Construction equipment will likely include pavers, graders, backhoes and/or bulldozers and equipment will be staged either on existing paved areas in the parking lot or on top of CC Hill in existing disturbed areas. Activities will likely occur during visitor use periods (due to weather constraints), but it is likely that only a portion of the parking area will be closed during construction. All mitigation measures as listed at the end of this section will be adhered to so as to minimize potential impacts to park resources and visitors.

Headquarters Area

Rehabilitation and Adaptive Reuse of Historic Buildings -There are five historic structures located in this area that currently support emergency services and wildland fire functions. These functions will be relocated to the new Emergency Services Wildland Fire complex once construction for this new facility is complete. Once these functions are moved, the buildings will become vacant and will be available for other uses. NPS proposes to use these historic buildings for other administrative uses, compatible with the historic setting and original use of this area for NPS administrative offices and housing. These actions are described below.

- Rehabilitate and retain use of the warehouse (building 118, which is currently used as the fire management office and community building), for management support functions. These include use as a temporary office, storage, and the NPS mail distribution center. The non-historic concrete porch and steps will be removed.
- Rehabilitate and convert two ranger offices (building 119); the north office to interpreter's office and the south office to fee supervisory office. Explore options to increase interior office space layout by removing wall partitions.
- Rehabilitate the holding facility (building 125, gas and oil station) to interpreter's office space.
- Rehabilitate and convert the fire equipment shed (building 126, currently used to house the fire truck and ambulance) to winter storage for vehicles. The non-historic rear addition will be removed.

- Rehabilitate and convert the wildland fire cache (building 171) to maintenance office, meeting space and storage space. Computer and phone lines will be provided.

NPS also considered reuse of the trail crew bunkhouse (building 111) and road and trails building (building 127) and proposes that they be rehabilitated, as time and funding allow, but that they retain their current use and function.

Once these buildings are rehabilitated for their new proposed use, the temporary storage containers ('con-ex' boxes), currently located in the middle of the Headquarters Area and creating an adverse visual impact to the surrounding historic district, will be relocated to more suitable locations.

Helibase and "Cochary" Trailer Court Removal— No new housing is proposed for the Headquarters Area and the two areas currently used as temporary housing for employees in two informal trailer courts will be removed. The employees using these areas will be relocated to the exposed frame cabins in the Campground Area when the rehabilitation of these cabins is complete (this project is currently underway). Some employees will also be accommodated in the expanded Norton Court in the Concessionaire Area (as described in detail below). The helibase and "Cochary" trailers will be removed and relocated and the sites restored.

Headquarters Area construction timing, duration and equipment staging – This aspect of the development plan is currently unfunded. It is uncertain when funding will become available, but actions in the Headquarters Area for structure utilization and removal of trailer courts is expected to occur in stages over the next 1 – 5 years. It is likely that the removal of the helibase and "Cochary" trailer courts will occur once the exposed frame cabin rehabilitation project is complete in 2006. Transport equipment will be on site in these areas to remove the trailers. Hand tools will be used to restore the sites and aide in revegetation of the areas with native species, as deemed feasible by the park's vegetation program manager. Removal of trailers is expected to take 2 – 10 days to fully complete, depending on availability of park staff to move them. Restoration of the sites will likely be sporadic and will consist of 1 – 2 personnel on site occasionally over the course of several seasons to plant and/or seed the areas and to water and weed.

Actions necessary for the rehabilitation and adaptive reuse of historic buildings in this area is more difficult to schedule. Funding is currently not available for these actions, but buildings will be vacated and functions moved to the new emergency services building in 2006. It will be a priority to begin adaptive reuse of these structures as soon as possible to avoid buildings remaining vacant for a long period of time. It is expected that some rehabilitation work will begin as early as 2006/2007 and will continue for several years (up to 5-7 years) until all buildings are complete. NPS is working closely with the SHPO on the recommended treatments for each building and will continue consultation with the SHPO on design details related to these rehabilitation efforts, as outlined in the programmatic agreement between the park and the SHPO (6 September 2005).

It is expected that rehabilitation efforts will require some equipment on site, but that it will primarily be for interior work, roofing and exterior siding and will not require ground disturbance outside of the immediate areas surrounding buildings. Proposed actions may require equipment to take things on and off roofs, and to remove construction debris, but use of this type of equipment will be occasional and sporadic during the project. If staging of construction equipment is needed, existing disturbed areas in non-visitor use areas will be used. A location near the project site in the administrative area will be selected to minimize new ground disturbance and disturbance to visitors. Work will primarily require hand tools such as saws, painters, sprayers, compressors, and nail guns and will result in increased traffic in these areas. All mitigation measures (as listed in the next section) related to minimizing impacts to park resources and visitors during construction will be adhered to. Connected actions, such as hooking up utilities, will be necessary for some buildings. This will likely require trenching equipment and may result in ground disturbance between existing buildings. All lines will occur within existing disturbed areas and will require only minimal vegetation disturbance and no tree removal.

Campground Area

Rehabilitation and Adaptive Reuse of Buildings - A recent condition assessment found that the non-historic public laundry/shower building (building 1568) in the campground is in good condition and the capacity appears to be satisfactory (NPS 2003b). NPS proposes to rehabilitate and retain this structure for its current use. While the historic log restroom (building 134) provides needed storage space, it is an attractive historic building that could be used in a more public fashion. NPS proposes to rehabilitate the structure and consider other uses, such as adaptive reuse as interpretive display space available to visitors in the campground. With the deferment of a transit system for the foreseeable future,

NPS also proposes to retain the existing historic gas station (building 916). It provides a needed service to visitors currently for gas and vehicle service.

A new campground registration building is currently being constructed as part of a campground rehabilitation and NPS proposes to also include space in this structure for backcountry permitting.

To address housing and associated needs in the Campground Area, NPS proposes the following actions:

- Rehabilitate an historic duplex log cabin (building 925) and convert it to seasonal housing
- Rehabilitate the historic shower/bath building (building 922) and convert it to a community building
- Rehabilitate the historic laundry (building 923) and use it as an employee laundry facility, for employees housed in the rehabilitated exposed frame cabins in this area.

Rehabilitation of the historic exposed frame cabins and both the shower/bath building and the laundry building was the subject of a separate Environmental Assessment/Assessment of Effect (NPS 2003a). The implementation of phase 1 of this rehabilitation has begun. The exposed frame cabins, when complete, will provide much needed seasonal employee housing. These units, however, are not intended to provide housing over the winter. NPS does not intend to increase the number of employees who over-winter on the North Rim.

Campground Area construction timing, duration and equipment staging – Except for those actions currently underway as part of the exposed frame cabin rehabilitation (rehabilitation of buildings 922 and 923) and the campground rehabilitation (campground registration building), actions in the campground area are currently unfunded. It is uncertain when funding will become available, but actions for structure utilization and housing are expected to occur in stages over the next 1 – 5 years. It is likely that the actions related to the exposed frame cabin rehabilitation will occur in 2006 – 2008. Actions involved, as discussed in the exposed frame cabin rehabilitation EA (NPS 2003a), will include some equipment on site during renovation. NPS is working closely with the SHPO on the recommended treatments for each building and will continue consultation with the SHPO on design details related to these rehabilitation efforts as the project continues (Programmatic Agreement, 6 September 2005). The completion of the campground registration building will occur in 2006.

Rehabilitation of the duplex log cabin (building 925) for use as seasonal housing will likely occur in the next 1 – 3 years. Rehabilitation of the laundry/shower building in the campground will be the responsibility of the park's hospitality concessionaire and will likely occur in the next 2-3 years. Rehabilitation of the log restroom (building 134) will occur as funding becomes available and is expected in the next 3 – 5 years. No additional utility connections will be needed. It is expected to take approximately 1 – 3 months to fully rehabilitate each structure.

Therefore, construction in the Campground Area will not occur all at once and will be staggered over the next several years. It is expected that rehabilitation efforts will require some equipment on site, but that it will primarily be for interior work, roofing and exterior siding and will not require ground disturbance outside of the immediate areas surrounding buildings. Proposed actions may require equipment to take things on and off roofs, and to remove construction debris, but use of this type of equipment will be occasional and sporadic during the project. If staging of construction equipment is needed, existing disturbed areas in non-visitor use areas will be used, if possible. A location near the project site in the campground area or the nearby Headquarters Area will be selected to minimize new ground disturbance and disturbance to visitors. Work will primarily require hand tools such as saws, painters, sprayers, compressors, and nail guns and will result in increased traffic in these areas. All mitigation measures (as listed at the end of this section) related to minimizing impacts to park resources and visitors during construction will be adhered to.

Concessionaire Area

Structure utilization - NPS proposes to retain the current use of two buildings and does not proposed any changes at this time. The NPS auto shop (building 963) will be retained; however, NPS will explore the feasibility of moving this function to the new emergency services/wildland fire complex when complete. If the auto repair function is deemed compatible with emergency services/wildland fire functions and will meet current building code requirements and is therefore moved at some point in the future, then the auto shop will be considered as space for concessionaire use (*This may require additional NEPA/NHPA compliance depending on specific details related to this potential future action*).

NPS also proposes to retain the existing use of the mule barn (building 1098) by the trail ride concessionaire for storage and isolation of sick animals in the short-term. However, the ownership and eligibility of the building for listing on the National Register is currently in question. NPS will resolve who owns the building and evaluate its historic integrity. Based on this information, NPS will consider appropriate options for the building (stabilization and retention or may consider taking the building down, if appropriate. *[This may require additional NEPA/NHPA compliance depending on specific details related to this potential future action]*).

Norton Trailer Court Expansion - To address employee housing needs in this area, NPS proposes to redesign and expand Norton Trailer Court to a capacity of approximately 34 sites. This will increase the size of this trailer court by about 22 sites and will expand the existing footprint of this developed area. Efforts will be made to sensitively design the area so as to retain as many trees as possible and minimize new ground disturbance. This expansion will result in approximately 4 – 5 acres of ground disturbance, adjacent to existing disturbed land, and the removal of an estimated 10 - 20 trees greater than 12 inches in diameter at breast height (dbh). Some small trees (less than 12 inches dbh) will also need to be removed. While the total acreage of the area designated for this expansion encompasses about 4 – 5 acres and estimates are made for tree removal, tree removal will be minimized as much as possible and not all areas within the 5 acre area will be disturbed. Most trees will remain and roads and trailer sites within the area will be designed to accommodate the existing vegetation as much as possible. This redesign and expansion will provide 18 sites for NPS employees and partners who use their personal travel trailers for summer housing, 8 South Rim duty-stationed employees temporarily working on the North Rim, and 8 sites for the trail ride concessionaire. The primary NPS users of the expanded Norton court will be NPS researchers and seasonal employees using their own or personal recreational vehicles or NPS travel trailers (that are then removed at the end of the season) and not employees housed in NPS trailers that remain year-round.

Concessionaire Area construction timing, duration and equipment staging – No changes are currently proposed for the auto shop or the mule barn. Therefore construction in the Concessionaire Area is limited to that needed for the expansion of the Norton Court. This aspect of the development plan is currently unfunded. It is anticipated that it will be under construction within 2 – 5 years, depending on when funds are available. Construction equipment that will be needed will include backhoes, graders, pavers, trenchers and tree removal equipment. The full expansion into the 3- 5 acre will likely be completed all at once. If so, construction will take approximately 4-6 months to complete. It is possible that it will be expanded in smaller areas, constructing a loop at a time, if funding or staff is limited. Staging of construction equipment will occur in existing disturbed areas in the Concessionaire Area, a non-visitor use area. Connected actions, such as utility hook-ups and relocation of trailers into new sites will also be needed and will require additional equipment and personnel on site during implementation. All mitigation measures (as listed in the next section) related to minimizing impacts to park resources and visitors during construction will be adhered to.

Lodge Area

Visitor Center Improvements - The existing North Rim Visitor Center in the Lodge area will be retained and interpretive exhibits and media available in the visitor center will be expanded and improved.

Enhance Slide Programs in Lodge auditorium – Existing orientation and interpretation slide programs in the Lodge auditorium, including both daytime and evening programming, will be enhanced. Evening programs are typically scheduled now, but NPS will expand this program into daytime hours as well. The lodge auditorium is not currently accessible to persons with disabilities. The park intends to work with the concessionaire to evaluate the feasibility of making this room accessible for all visitors (*Additional NEPA and NHPA compliance may be necessary as details become available for this potential future action.*)

Lodge Services and Facilities / Visitor Lodging Conversions - Options under preliminary consideration by NPS to improve facilities for visitors, operated by the park's hospitality concessionaire, include the following actions. The park is currently exploring the preliminary feasibility and cost of the following actions:

- Relocation of concessionaire employees housed in nine cabin units and the lower level of the motel units to the new dormitory currently under construction in the Concessionaire area. If this action occurs, then these nine Lodge cabin units will be available for use as visitor lodging.
- Restoration of the Lodge lobby to its original configuration;
- Relocation of the administrative offices, possibly to the motel basement;
- Remodel of the Lodge kitchen;

- Relocation of the saloon function to the café and the café function to the saloon;
- Expansion of the Lodge restrooms into the saloon area;
- Conversion of the accounting offices located behind the current saloon into a café kitchen and relocation of these offices, possibly into the motel basement.

These actions are intended to improve food service, Lodge registration/check-in and restroom availability for visitors. Additional NEPA and NHPA compliance may be necessary as more details become available for these actions. However, minimal ground disturbance is expected to occur and actions will be limited to building interiors. All actions will be guided by the SHPO's involvement in future design phases.

Reconfigure the Lodge Area Road and Parking Area – A passenger drop off zone will be created at the head of the lodge entry road. The plaza in front of the visitor center will be extended to wrap around the drop off area to provide a pedestrian connection with the visitor center and connecting walks to the lodge. A mountable stone curb will edge the perimeter of this area to create a visual terminus for public vehicle traffic. Only emergency, service, and shuttle vehicles will be permitted beyond this point. The existing disabled accessible parking spaces near the Lodge entrance will remain at this time and be available on a case-by-case basis. The lodge entry road will be converted into the main pedestrian corridor to the Lodge. The existing asphalt and concrete will be removed and the original historic width will be re-established using a pedestrian-friendly paving material. Regrading of the original road profile may be needed to ensure accessibility. Walkways will be extended to reach the redefined road edge. The existing sidewalks in front of the deluxe cabins will be de-emphasized visually and possibly removed or realigned to assure cabin guest privacy. Pedestrian circulation from the parking area to this new pedestrian corridor will be refined further to make sure it is visibly emphasized.

A bus-only parking area will be created within the existing parking area by removing a portion of an island in the parking lot. This will provide safe pull-through parking for these large vehicles and eliminate the need for backing up. This change will result in a loss of 22 existing parking spaces. To offset this change, the entire lot will be restriped, changing the existing generous ten-foot wide parking spaces to a more standard nine foot width. In addition, the existing overflow and oversized vehicle parking will be formalized and expanded to create additional parking spaces. The designation and location of accessible parking spaces within the parking area will be determined in later design phases to best meet the needs of visitors and meet current Americans with Disabilities Act (ADA) standards. All of these proposed changes combined will result in a net increase in parking for approximately 4-9 cars, 3-6 buses and 2-4 oversized vehicles. This proposal will result in approximately 0.5 acres of new ground disturbance and the removal of approximately 4 – 6 large trees (greater than 12 inches dbh). Approximately 6 – 8 smaller trees, less than 12 inches dbh, will also need to be removed.

Lodge Area construction duration and equipment staging – Enhancement of slide programs in the Lodge and installation of new exhibits in the Visitor Center will not require construction. Installation of new exhibits, however, will require some level of interior work to install and mount exhibits and may result in increased traffic and congestion in the visitor center area. Exhibits will be installed at non-peak visitor use times to minimize disruption to pedestrian circulation and visitor access to the building.

Actions necessary for the rehabilitation and adaptive reuse of historic buildings in this area is more difficult to schedule. It is not entirely clear at this time whether these actions are feasible and if funding will be available for them. It is possible that any needed rehabilitation work on the 9 visitor cabins and the motel basement remodels will begin as early as 2006/2007 and will likely be complete in 1 – 2 seasons. Other aspects of the proposal in this area related to visitor facilities that will require changes to the Lodge itself will likely not be implemented for another 3 – 7 years, depending on feasibility, funding availability and operations. NPS is working closely with the SHPO on the recommended treatments for each building and will continue consultation with the SHPO on design details related to these rehabilitation efforts as work continues to refine each proposal (Programmatic Agreement, 6 September 2005).

Therefore, rehabilitation actions will be staggered in this area and will not occur all at once. It is expected that rehabilitation efforts will require some equipment on site, but that it will primarily be for interior work (and potentially some roofing and exterior siding work) and will not require ground disturbance outside of the immediate areas surrounding buildings. Proposed actions may require equipment to take things on and off roofs, and to remove construction debris, but use of this type of equipment will be occasional and sporadic during the project. If staging of

construction equipment is needed, existing disturbed areas in non-visitor use areas will be used, if possible. Work will primarily require hand tools such as saws, painters, sprayers, compressors, and nail guns and will result in increased traffic in these areas. All mitigation measures (as listed in the next section) related to minimizing impacts to park resources and visitors during construction will be adhered to.

The reconfiguration of the Lodge road and parking area is currently funded and is expected to be implemented in 2006 or 2007. Construction equipment including backhoes, graders, pavers, concrete trucks and tree removal equipment may be necessary for implementation of this project. Construction may take two seasons to complete; 2-3 months for work adjacent to the Lodge and 2-3 months for parking lot improvements. NPS is working closely with the SHPO on the recommended actions for this area as a whole, and will continue consultation with the SHPO on design details as work continues to refine the proposal (Programmatic Agreement, 6 September 2005).

The Lodge Area is the primary destination for visitors to the North Rim. Implementation of construction activities in this area will be sensitively planned and designed to minimize disturbance during peak season and during sensitive times of the day.

Bright Angel Peninsula-General

Enhance interpretive opportunities along area trails - New interpretive signs will be installed along area trails, guided by a sign plan. Details are not yet available for this aspect of the plan. Locations and types of signs are not yet determined. For this reason, additional compliance NEPA and NHPA (at a minimum) will likely be necessary as sign locations and details are developed by the park. This aspect of the proposal is not analyzed further in the EA.

Greenway Trail - A North Rim segment of the Greenway Trail system (currently established on the South Rim) is proposed for Bright Angel peninsula. This approximately 2-mile long multi-use trail would be established between the North Kaibab Trailhead and the Lodge area, following the alignment of an existing trail (the Bridle Trail). The Bridle Trail currently averages about 6 feet in width, although there are some areas, such as near the North Kaibab Trailhead where the width is as much as 17 feet wide, and other areas, such as near the Concessionaire area, where the width is as narrow as 4 feet. The Bridle Trail currently has an unimproved surface; it is essentially a social trail used by local residents and occasionally visitors in certain high use areas. The Greenway Trail would improve this existing trail, using its current alignment, and it would be designed for multiple uses including pedestrians, bicyclists and equestrians. It would be no more than 8 feet wide, which would equate to increasing the existing width up to approximately 2 additional feet in some areas. Reducing the existing width, in areas where it is currently greater than 8 feet, would not occur. In other words, no newly constructed trail segment would have a width greater than 8 feet, but if the existing width is already greater than 8 feet, efforts would not be used to reduce the existing width. Constructed trail width would also vary according to the terrain and the presence of trees and would be narrowed below 8 feet as needed in places to avoid having to remove trees. The trail would not be paved but a soil hardener would be used to provide a more even surface, minimize erosion and reduce the need for maintenance. The trail would be designed to meet current accessibility standards from the Headquarters Area to the Lodge Area. The existing steep section of trail from the North Kaibab Trailhead up to the headquarters area does not meet current accessibility standards.

Eight feet was selected as the appropriate width, following the "Guide for the Development of Bicycle Facilities" (American Association of State Highway and Transportation Officials, or AASHTO, 1999). These guidelines recommend 10 feet as the appropriate width for a two-directional shared use path. The guidelines support a reduced width of 8 feet if certain conditions are met (including good visibility for passing and expected low bicyclist and pedestrian use), and support an increased width of 12 feet or even 14 feet if substantial use by bicyclists, joggers, skaters and pedestrians is expected, steep grades, and/or large maintenance vehicles. These recommended widths are all in keeping with Americans with Disabilities Act (ADA) requirements for wheelchairs on trails (a minimum width of 5 feet is recommended so as to provide 30 inches of width for each of two wheelchairs side by side). For this segment of the Greenway Trail on the North Rim, 8 feet was selected as the maximum width for any newly constructed segment of trail. While the proposed Greenway Trail would be a two-directional, shared use path, NPS determined that a width greater than 8 feet would be excessive; that this segment of trail would not receive the high levels of use that would require a wider trail.

There is only one area where the Greenway alignment will need to veer substantially off of the existing Bridle Trail alignment. This new trail section, approximately 0.2 miles in length, will be constructed approximately 300 feet from the existing trail in an area of steep terrain just south of the Concessionaire Area. In order for the trail to meet current

accessibility standards, a long switch back is necessary in this area to minimize the steepness of the trail. Several pull-outs for wheelchairs will also be necessary in this section where the grade dictates. Pullouts will be approximately 20 feet long by 10 feet wide and will simply be a wide, flat spot in the trail where wheel chair users could stop and rest as necessary.

Although tree removal will be avoided as much as possible, there are two areas where removal of some trees will be unavoidable; one is the switch back area described in the above paragraph where 3 – 8 small aspen trees, less than 6 inches dbh, will be removed, and the second is an area of thick oak saplings, just before the trail enters the Lodge area, near the Visitor Center. In this 40 – 50 foot long section of trail, several small oak trees will need to be cleared to provide enough width for the trail. While it is possible that an occasional ponderosa pine or white fir tree may require removal for construction of this trail, this removal will be minimized as much as possible. No trees over 12 inches dbh will be removed. Some rock lining will be necessary along portions of the trail for steep areas where the terrain dictates. A single tier rock wall will need to be constructed in some steep areas of the trail. Native stone will be used for these features. In general, other areas of the trail will not be lined, but this will be determined during later design phases of the project, taking into consideration recommendations made in the Cultural Landscape Report (Milner 2003).

There are two road crossings that will be required. Both will simply be striped and signed as pedestrian/bicycle crossings.

At both ends of this trail segment, at the North Kaibab Trailhead and at the Visitor Center area near the Lodge, small gathering points will be created. These areas will include interpretive and wayfinding signage with simple bench seating on a hardened, all weather surface. Both areas will be of simple design. The design for the terminus of the trail near the visitor center will take into consideration its location within the historic district and the surrounding cultural landscape.

The Bright Angel Peninsula CLR (Milner 2003) has been referenced for specific recommendations related to this proposed trail and these recommendations are included as part of this proposal. Some of these recommendations, which have already been incorporated into the proposed trail design, include:

- Consider adaptively re-using the Bridle Trail alignment rather than creating a new trail or adding onto the entrance road shoulders;
- Consider paving and formalizing the trail to increase accessibility for persons with disabilities and to encourage alternative forms of transportation;
- Signage and site features, such as benches and trash receptacles, should be minimal and unobtrusive in design. Install only as needed.
- Avoid shiny, reflective, or brightly colored signage.

Greenway Trail Construction duration and equipment staging: The trail will require two seasons to build. The project will begin in September 2005 and will likely be complete by the fall of 2006. Small bobcats, jackhammer, roller, dump truck, and a backhoe (or comparable types of equipment) will be used during construction. This equipment, when not in use, will be staged at CC Hill using existing disturbed ground in the administrative area. Materials (rock and dirt) will be staged at Lindberg Hill, a previously disturbed area often used as a fire camp. It is also likely that existing disturbed areas near the North Kaibab Trailhead parking area may also be used for temporary staging as the project progresses. Ground disturbance for the construction of this proposed trail is estimated at 2 – 3 acres.

Proposed Recommendations Outside Park Boundaries

While lands outside of the park boundary are not under NPS jurisdiction, the relationship of the Kaibab Plateau Visitor Center in Jacob Lake, Arizona and the scenic roadway, Highway 67, between Jacob Lake and the park entrance are integral to visitor orientation to the park and their experience once they have entered the park boundary. The 1995 GMP described a vision for the Kaibab Plateau that has been partially implemented, through cooperation with the U. S. Forest Service (USFS). This North Rim development planning effort includes the consideration of additional improvements in this area.

Proposed recommendations outside park boundaries are just that, recommendations for consideration by the USFS, and are not proposed NPS actions under this alternative. However, to provide readers with the full compliment of concepts being discussed jointly with the USFS to address necessary improvements at the Kaibab Plateau Visitor Center and other areas between Jacob Lake and the park, the following concepts are described below. NEPA and NHPA compliance, in

cooperation with the USFS may be necessary if these actions are ultimately implemented. *These concepts under consideration outside of park boundaries are not part of the decision being made in this document.*

Improvements at the Kaibab Plateau Visitor Center in Jacob Lake - This will require the initiation of a partnership planning effort between the NPS and the USFS. While cooperative efforts between NPS and USFS for operation of this visitor center are on-going, efforts will be strengthened. Specific issues that will be addressed include an evaluation of the need for, and the feasibility of, expanding the visitor center or reconfiguring existing space; exploring options for improving the visitor center parking area to address drainage problems, accessibility issues, and the need for a different configuration; developing appropriate displays and orientation information for the existing 24-hour kiosk; and exploring options for improving road signage and road configuration in the area to improve visibility of the visitor center and access to it (USFS has been working with the Arizona Department of Transportation on this issue).

Highway 67 Corridor - Other options for consideration by the USFS and NPS for enhancing orientation and interpretive opportunities along Highway 67 from Jacob Lake to the park include implementation of a traveler information system that will use a local radio station to broadcast regional information, implementing an auto tour or pamphlet identifying points of interest, and improved road signage.

MITIGATION MEASURES

The mitigation measures listed below are considered part of the preferred alternative and will be followed during project implementation. These actions were developed to lessen the potential for adverse impacts from implementing the preferred alternative, and have proven to be effective in reducing environmental impacts on previous projects.

Contractor Orientation. Contractors working in the Park are given orientation concerning proper conduct of operations. This orientation is provided in both written form and verbally at a preconstruction meeting. This policy will continue on proposed projects. Orientation topics will include, but not be limited to:

- Wildlife should not be approached or fed.
- Collecting any Park resources, including plants, animals, and historic or prehistoric materials, is prohibited.
- Contractor must have a safety policy and a vehicle fuel and leakage policy in place.
- Other environmental concerns and requirements discussed elsewhere in the EA will be addressed, including relevant mitigation measures listed below.

Limitation of Area Affected. The following mitigation measures will be implemented to minimize the area affected by construction activities.

- As needed for components of the project that require construction, staging areas for the construction office (a trailer), construction equipment, and material storage will either be located in previously disturbed areas near project sites or in other disturbed areas that best meet the needs of the project and minimizes new ground disturbance. All staging areas will be returned to pre-construction conditions once construction is complete. Standards for this, and methods for determining when the standards are met, will be developed in consultation with the Park Restoration Biologist.
- Construction zones will be fenced with construction tape, snow fencing, or some similar material before any construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications, and workers will be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.

Soil Erosion. To minimize soil erosion, the following mitigation measures will be incorporated into the action alternative.

- Standard erosion control measures such as silt fences, jute logs and biodegradable erosion blankets, or equivalent control methods will be used to minimize any potential soil erosion. The park does not allow the use of straw or straw bales for erosion control, due to the likelihood of their containing weed or exotic seed.

- Any trenching operations will be by rock saw, backhoe, track hoe, punjar, ditch digger and/or trencher, with excavated material side-cast for storage. After trenching is complete, bedding material will be placed and compacted in the bottom of the trench and the utility lines installed in the bedding material. Back filling and compaction will begin immediately after the utility lines are placed into the trench, and the trench surface will be returned to pre-construction contours. All trenching restoration operations will follow guidelines approved by Park staff. Compacted soils will be scarified and original contours reestablished.
- A Salvage and Revegetation Plan will be developed for the project by a landscape architect or other qualified individual, in coordination with the Park Restoration Biologist. Any revegetation efforts will use site-adapted native species and/or native seed, and Park policies regarding revegetation and site restoration will be incorporated into the plan. The plan will consider, among other things, the use of native species, plant salvage potential, exotic vegetation and noxious weeds, and pedestrian barriers. Policy related to revegetation is referenced in NPS Management Policies (NPS 2001a; Chapter 9).

Vegetation. To minimize impacts to vegetation and to prevent the introduction and minimize the spread of exotic vegetation and noxious weeds, the following mitigation measures will be incorporated into the action alternative.

- Inventories for existing populations of exotic vegetation at construction sites will occur and any populations found will be treated prior to construction activities.
- A restoration biologist will provide input on salvage potential and tree avoidance at project sites where necessary.
- All construction equipment that will leave the road (e.g., bulldozers and backhoes) will be pressure washed prior to entering the Park.
- The location of the staging areas for construction equipment will be Park-approved and the needs for treating exotic vegetation will be considered.
- Parking of vehicles will be limited to existing roads or the staging area.
- Any fill, rock, or additional topsoil needed will be obtained from a Park-approved source.
- All areas disturbed by construction or for those planned for restoration (Helibase and Cochary trailer courts) will be revegetated using site-adapted native seed and/or plants.
- Vegetation to remain within construction limits will be surrounded by a protective barrier.

Water Quality and Floodplains. To minimize potential impacts to water quality, the following mitigation measures will be incorporated into the action alternative.

- Standard erosion control measures such as silt fences, sand bags, or equivalent control methods will be used to minimize any potential sediment delivery to streams.

Special Status Species. To protect any unknown or undiscovered threatened, endangered, or special status species, the construction contract will include provisions for the discovery of such. These provisions will require the cessation of construction activities until Park staff evaluates the project impact on the discovery and will allow modification of the contract for any protection measures determined necessary to protect the discovery. Mitigation measures for known special status species are as follows:

California Condor

- Prior to the start of a construction project, the Park will contact personnel monitoring California condor locations and movement within the Park to determine the locations and status of condors in or near the project area.
- If a condor occurs at the construction site, construction will cease until it leaves on its own or until permitted personnel employ techniques that result in the individual condor leaving the area.
- Construction workers and supervisors will be instructed to avoid interaction with condors and to contact the appropriate Park or Peregrine Fund personnel immediately if and when condor(s) occur at a construction site.
- The construction site will be cleaned up at the end of each day that work is being conducted (i.e., trash disposed of, scrap materials picked up) to minimize the likelihood of condors visiting the site. Park condor staff will complete a site visit to the area to ensure adequate clean-up measures are taken.

- To prevent water contamination and potential poisoning of condors, the park-approved vehicle fluid-leakage and spill plan will be adhered to for this project. This plan will be reviewed by the Park biologist for adequacy in addressing condors for this project.
- If a new structure occurs on the rim or above tree line in other areas, there may be a need to install condor deterrent devices, such as Nixalite, on the structure. This will be evaluated on a case-by-case basis by the Park wildlife biologist.
- New construction will limit the use of “soft” and/or colorful construction materials on roofs and along building foundations to minimize the possibility of condors becoming attracted to the building. An example of this type of material includes rubber weather-stripping which condors can pull off and ingest.
- If non-nesting condors occur within 1 mile of the project area, blasting will be postponed until condors leave or are hazed by permitted personnel.
- If condor nesting activity is known within 1 mile of the project area, then blasting activity will be restricted during the active nesting season, if viable nests persist. The active nesting season is February 1 to October 15, or until young are fully fledged. These dates may be modified based on the most current information, in consultation with the Park biologist and the FWS.
- If condor nesting activity is known within 0.5 mile of the project area, then light and heavy construction in the project area will be restricted during the active nesting season, if viable nests persist. The active nesting season is February 1 to October 15, or until young are fully fledged. These dates may be modified based on the most current information, in consultation with the Park biologist and the FWS.

Mexican Spotted Owl (MSO)

- If a construction project occurs within a Protected Activity Center (PAC) with no known nest site, then all construction activity will be restricted to the non-breeding season (September 1 – February 28). However, if the project in a PAC is at least 0.8 km (0.5 mile) from known nest sites and the project does not include blasting, then the project can be implemented during the breeding season. The breeding season is March 1 – August 31. As of August 2004, this applies to Shoshone Pt and Buggeln Hill.
- If a construction project outside of PACs occurs within 1.6 km (1 mile) of a known PAC nest or roost site, the boundary of a PAC where the nest or roost site is not known, or unsurveyed restricted, protected, or predicted MSO habitat, then all blasting in that project area will be restricted to the non-breeding season (September 1 – February 28). Blasting may be necessary for vault excavation at some sites. The park wildlife biologist will be consulted for the latest information on PACs within this 1 mile distance.
- If a construction project outside of PACs occurs within 0.8 km (0.5 mile) of a known PAC nest or roost site, the boundary of a PAC where the nest or roost site is not known, or unsurveyed restricted, protected, or predicted MSO habitat, then light and heavy construction activity in that project area will be restricted to the non-breeding season (September 1 – February 28). As of February 2005 this applies to all project components on the peninsula south of the Campground area (Lodge Road and parking area improvements, portions of the Greenway Trail, and potentially aspects of building rehabilitation, depending on what equipment will be required. Refer to the biological assessment (NPS 2005b) for the most current information.

Cultural Resources. To minimize the impacts of proposed activities on cultural resources, the following mitigation measures will be incorporated into the action alternative.

- A Programmatic Agreement (PA) between the SHPO and Grand Canyon National Park has been prepared for this project to fully address the potential for any impacts to cultural resources and to streamline continued Section 106 consultation responsibilities throughout the multi-year implementation period for the North Rim Development Plan (6 September 2005). The final PA is incorporated into this decision document by reference. Stipulations outlined in the PA that will guide continued consultation with the SHPO under Section 106 are repeated below:
 - The NPS will consult with the SHPO on a specific project-by-project basis in order to determine the precise nature of anticipated effects on historic properties as specific components of the North Rim Development Plan, as described under the preferred alternative, are funded and planned for implementation. The NPS shall seek to avoid or minimize effects to historic properties through project

design, facilities location, or other means. NPS will document these assessments on NPS-generated “Assessment of Effect” forms.

- Preliminary designs for historic building rehabilitation will be submitted to the SHPO early in the planning process (*i.e.* concept stage, or at approximately 30% design). Review comments will be incorporated, with additional draft designs sent on or about the 65% design stage (if changes have been made), and at the draft final phase.
- If previously unknown cultural resources are discovered during the implementation of this project, all work in the immediate vicinity of the discovery will be halted until the resources can be identified and documented. An appropriate mitigation strategy will be developed by the Park’s Chief of Cultural Resources or Archaeologist in consultation with the SHPO.
- Archaeological resources will be protected and preserved in place. If such resources must be disturbed, a mitigation plan will be developed by the Park’s Chief of Cultural Resources or Archaeologist in consultation with the SHPO, prior to project implementation.
- The Park will follow the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, and Director’s Order #28. Landscape modifications will be made only after consultation with a landscape architect.
- The park’s historical architect and landscape architect will approve site plans, staging areas, and architectural drawings, in consultation with the SHPO as necessary, prior to project implementation.
- A property will be used as it was used historically, or will be reused in a manner that maximizes the retention of distinctive materials, feature, spaces, and spatial relationships. The historic character of a property will be retained and preserved. Distinctive materials, features, finishes, and construction techniques that characterize a property will be preserved.
- Smaller historic landscape features (*e.g.* stone firewood shelters, native stone drinking fountains, stone headwalls, flagpoles, and a peeled log trail shelter near the head of the North Kaibab Trail) will be protected during project activities.
- Aspen trees with carvings along the Bridle Trail will be protected.
- The North Rim Greenway Trail will be constructed in two phases. The first phase will include any work outside (north) of the boundary of the Grand Canyon Lodge National Historic Landmark District. Phase two will include any trail work being done within the National Historic Landmark District, including formalization of a gathering area next to the Visitor Center. Preliminary designs for the gathering area will be prepared as a collaborative effort between the Park’s Historical Architect, Landscape Architect and a cultural resource specialist, in consultation with the SHPO. Phase two of the work on the Greenway Trail will not be implemented until the SHPO is provided an opportunity to review the final design for the gathering area at the trailhead.
- All workers will be informed of the penalties of illegally collecting artifacts or intentionally damaging any archeological or historic property. Workers will also be informed of the correct procedures if previously unknown resources were uncovered during construction activities.

Visual Resources. To minimize visual impacts, mitigation measures will include the following:

- Natural, muted colors, that replicate existing location hues, will be used to blend any built materials into the landscape.
- Signs and kiosks will be sited so that they do not compete with views and vistas and are incorporated into the surrounding landscape.
- Signage and site furnishings, such as benches and trash receptacles will be minimal and unobtrusive.
- Avoid shiny, reflective, or brightly colored signage that will detract from the wilderness feel of area trails or historic areas (Milner 2003, Appendix T). Wayside exhibits will be contemporary in design, but simple rather than intricate or overly-bold that distract from the historic character of certain areas.
- Construction activities will be coordinated with other projects to minimize the visual intrusion of construction equipment and activity in visitor areas, as much as possible. Projects will be staggered in time and area to minimize impacts to scenic areas and heavily used visitor areas during peak season.

Visitor Experience. The following mitigation measures will be incorporated into the action alternative to minimize the impacts of construction activities on the visitor experience:

- Construction activities will be restricted during peak use days such as holidays and some weekends during the busiest times of the year to minimize disruption to visitors.
- Traffic in any one direction will not be stopped for more than 15 minutes to minimize disruption to traffic flow.
- Unless otherwise approved by the Park, operation of heavy construction equipment and helicopters will be restricted to 8:00 am to 6:00 pm in the summer (May 1- September 30) and to 9:00 am to 5:00 pm during the rest of the year.
- As time and funding allows, information regarding implementation of this project and other foreseeable future projects located in public areas will be shared with the public upon their entry into the park during construction periods. This may take the form of an informational brochure or flyer about the projects distributed at the gate and sent to those with reservations at park facilities, postings on the park's website, press releases, and/or other methods. The purpose of these efforts will be to minimize the potential for negative impacts to the visitor experience during implementation of this project and other planned projects during the same construction season.
- Construction activities will be coordinated with other projects to minimize the visual intrusion of construction equipment and activity in visitor areas, as much as possible. Projects will be staggered in time and area to minimize impacts to visitors and the quality of their experience, particularly within heavily used visitor areas during peak season.

Air Quality. Air quality impacts of the action alternative are expected to be temporary and localized. To minimize these impacts, the following actions will be taken:

- To reduce entrainment of fine particles from hauling material, sufficient freeboard will be maintained and loose material loads (aggregate, soils, etc.) will be tarped.
- To reduce tailpipe emissions, construction equipment will not be left idling any longer than is necessary for safety and mechanical reasons.
- To reduce construction dust in the short term, water will be applied to problem areas. Equipment will be limited to the fenced project area to minimize soil disturbance and consequent dust generation.
- Landscaping and revegetation will control long-term soil dust production. Mulch and the plants themselves will stabilize the soil and reduce wind speed/shear against the ground surface.
- Contact the Arizona Quality Division, Compliance Section, of the Arizona Department of Environmental Quality if asbestos is present in any building that would be rehabilitated to ensure compliance with the asbestos National Emission Standards for Hazardous Air Pollution (NESHAPS).
- Explore the need for modifying the park's existing permit with the Arizona Department of Environmental Quality, authorizing the use of existing diesel generators for back-up electrical generation on the North Rim. A modified permit is likely not needed if a new 600 kW unit is installed, but if the park intends to distribute existing total hours of use among fewer generators, a relatively simple permit modification will likely be required.

ALTERNATIVES CONSIDERED

The EA evaluated two alternatives in detail for addressing the purpose and need for action; the no action alternative and the preferred alternative. The preferred alternative is as described previously in this document in detail.

Alternative A – No Action Alternative: Under the no action alternative, existing conditions will be maintained at the North Rim. A developed zone for the North Rim is identified in the 1995 GMP and is used to guide management actions. The developed zone primarily includes Bright Angel peninsula but also encompasses the North Rim Entrance Road and the road to Cape Royal and Point Imperial. It comprises approximately 1,127 acres within the Bright Angel watershed subunit, or approximately 6% of the watershed subunit. Within this 6% developed area, approximately 234 acres (or 21%) is disturbed by past activities and developments. Existing developments include roads, trails, parking areas, buildings, and utilities. The North Rim receives most of its visitation between May and October, when facilities at the North Rim are open. Visitation peaks in the summer months of June and July and is very limited in winter when snow blocks the road.

Park staff is present at the North Rim throughout the year, with limited staffing in the winter, and perform general maintenance functions.

Under the no action alternative, no substantial improvements would be made to visitor orientation or interpretation services, to visitor facilities or support functions, to vehicular and non-vehicular circulation, nor for the utilization of structures or employee housing needs, as identified as needs in the development plan. However, projects that have recently been completed separate from the development plan and those that are in the process of being implemented will be completed. These are described briefly in Appendix A of the EA and include projects such as construction of a new administration building, construction of a new emergency services/wildland fire facility, campground rehabilitation, water distribution system improvements, construction of a new employee dormitory and recreational vehicle park upgrades. While many of these projects were designed to improve facilities for employees and visitors and have been acknowledged for greatly improving some needed employee and visitor facilities on the North Rim, these actions do not go far enough to address the needs identified under the development planning effort. Vehicle overcrowding would continue at the Kaibab Trailhead, vehicle congestion and inadequate bus parking would continue near the lodge, interpretive programs and opportunities would be lacking throughout the North Rim and employee housing overcrowding and substandard housing conditions would continue. No changes will be made to Lodge accommodations or dining opportunities at the saloon or the Café on the Rim.

The No Action alternative provides a basis for comparing the management direction and environmental consequences of the action alternative. If the no action alternative were selected, NPS would respond to future needs related to visitor orientation/interpretation, vehicular and non-vehicular circulation, structure utilization and employee housing without major actions or changes in course.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which guides the Council on Environmental Quality (CEQ). The CEQ provides direction that “[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Through the process of internal scoping and scoping with the public and other agencies, the environmentally preferred alternative selected is Alternative B. Alternative B best meets the purpose and need for action and best addresses overall Park Service objectives and evaluation factors. Alternative B will result in only minimal new ground disturbance and vegetation removal and meets the purpose and need for action. It is a “light touch” approach to achieving the need for action with relatively little new development. It achieves criteria 3, 4, and 5 by emphasizing the preservation of the rustic character of the North Rim, prioritizing the use of existing historic structures over the construction of new ones and otherwise improving visitor and employee services without requiring substantial changes in the current operation and within existing developmental footprints. No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in the EA. Alternative B is recommended as the Preferred Alternative and meets both the Purpose and Need and the project objectives.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. As fully discussed in the EA, the preferred alternative will not affect air quality, soundscape, visual/scenic resources, floodplains and wetlands, minority or low-income populations, prime and unique farmland, socioeconomic values, or recommended wilderness.

Implementation of the preferred alternative will result in minor adverse, short- and long-term impacts to soils and water (watershed resources) due to disturbance of up to approximately 8.75 acres within the Bright Angel subunit watershed.

Implementation of the preferred alternative will result in minor adverse, short- and long-term impacts to vegetation due to the loss of approximately 14 – 26 large ponderosa pine trees greater than 12 inches in diameter at breast height (dbh) and increased potential for spread of exotic vegetation.

Implementation of the preferred alternative will result in minor adverse short- and long-term impacts to general wildlife populations due to a loss of habitat and/or habitat quality. Implementation of the preferred alternative will result in negligible adverse short- and long-term impacts to Mexican spotted owl, California condor, peregrine falcon and Northern goshawk due to increased noise during construction and impacts to foraging habitat. Implementation of the preferred alternative will result in minor adverse long-term impacts to Kaibab squirrels due to removal of large ponderosa pine trees that could provide foraging, nesting and sheltering sites for Kaibab squirrels.

Implementation of the preferred alternative will result in negligible adverse, long-term impacts to archeological resources due to the lack of archeological sites in the project area and implementation of mitigation measures; minor beneficial, long-term impacts to historic resources and cultural landscapes due to implementation of improvements for the Lodge road, consolidation of housing outside of historic districts, removal of intrusions on the historic setting in the headquarters area, and adaptive reuse of historic structures; and negligible long-term adverse impacts to ethnographic resources due to lack of known resources in the project area and continued consultation with affiliated tribes.

Implementation of the preferred alternative will result in moderate beneficial long-term impacts to visitor experience due to implementation of improvements in visitor orientation and interpretation and facilities. Short-term, minor adverse impacts will result during the construction period.

Implementation of the preferred alternative will result in minor to moderate beneficial, long-term impacts to park operations due to rehabilitation and adaptive reuse of structures for needed administrative functions, consolidated seasonal housing and safer circulation through improvements in the Greenway trail and parking areas.

Degree of effect on public health or safety. Adherence to mitigation measures designed to minimize safety risks and adverse impacts to visitors during the construction period will address these limited risks to public safety. Moderate, beneficial, long-term impacts to visitors are expected due to improvements in visitor orientation and interpretation and facilities (such as the Greenway Trail, the Lodge area, and parking areas) These improvements are expected to decrease the safety risks associated with circulation of pedestrians and bicyclists in areas accessed by vehicles (Lodge entry road, Lodge parking area) and enhance the movement of visitors that are walking or biking without conflicting with vehicle traffic (Greenway Trail).

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. As fully discussed in the EA, the preferred alternative will not affect air quality, soundscape, visual/scenic resources, floodplains and wetlands, minority or low-income populations, prime and unique farmland, socioeconomic values, or recommended wilderness. No wild and scenic rivers are designated near the project area and none will be affected by implementation of the preferred alternative. No ecologically critical areas occur within the project area and only minor disturbance to the surrounding vegetation will occur. Mitigation measures will be implemented that minimize the potential for adverse impacts to natural and cultural resources.

Degree to which effects on the quality of the human environment are likely to be highly controversial. There were no highly controversial effects identified during either preparation of the EA or the public review period.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks. There were no highly uncertain, unique or unknown risks identified in the EA or during the public review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The preferred alternative neither establishes a precedent for future actions with significant effect nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Implementation of the preferred alternative will not result in any significant cumulative impacts.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. Several historic buildings and identified cultural landscapes occur within the project area and several buildings are proposed for rehabilitation and adaptive reuse. All components of the preferred alternative take into consideration the potential for impacts to these sensitive cultural resources and project proposals have been designed with protection of these resources in mind, so that adverse effects do not occur. A programmatic agreement with the State Historic Preservation Officer has been finalized (6 September 2005) which streamlines the Section 106 process for individual components of the development plan as they are implemented over time so as to ensure that our responsibilities under Section 106 for protecting these cultural resources are met. All stipulations identified in the Programmatic Agreement have been incorporated into the project and are referenced in the mitigation measures section of this document. Tribal review of the EA and of the PA is complete.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat. For purposes of Section 7 consultation under the Endangered Species Act, implementation of the preferred alternative may affect, but is not likely to adversely affect, the California condor and the Mexican spotted owl and its critical habitat. Concurrence on this determination was received from the U.S. Fish and Wildlife Service on 26 July 2005.

The California condor was listed as an endangered species in 1967. A nonessential, experimental population of California condors has been established in Northern Arizona, and within Grand Canyon National Park the condor has the full protection of a threatened species. It has been determined by park staff that implementation of the preferred alternative “may affect, but is not likely to adversely affect” the California condor. This determination is based on the potential that condors could be attracted to the increased activity at project sites during construction. Mitigation measures have been developed jointly between park staff and the U.S. Fish and Wildlife Service (FWS) to minimize the potential for adverse impacts to the condor during project implementation. These measures are included as part of the proposed action and identified under the preferred alternative. The FWS has been consulted and concurred with the determination that condors may be affected, but are not likely to be adversely affected by the implementation of the preferred alternative.

The Mexican spotted owl (MSO) was listed as a threatened species in 1993 and parts of Grand Canyon National Park were designated as critical habitat in 2001. It has been determined by park staff that implementation of the preferred alternative “may affect, but is not likely to adversely affect” MSO. This determination is based on the fact that some project sites are in close proximity to an occupied Protected Activity Center. Mitigation measures have been developed jointly between park staff and the U.S. Fish and Wildlife Service (FWS) to minimize the potential for adverse impacts to the MSO during project implementation. These measures are included as part of the proposed action and identified under the preferred alternative. The FWS has been consulted and concurred with the determination that MSO and its critical habitat may be affected, but are not likely to be adversely affected by implementation of the preferred alternative.

Whether the action threatens a violation of Federal, state or local environmental protection law. The preferred alternative violates no federal, state, or local environmental protection laws.

IMPAIRMENT OF PARK RESOURCES OR VALUES

In addition to determining the environmental consequences of the preferred and other alternatives, National Park Service policy (*Management Policies*, 2001) requires analysis of potential effects to determine whether or not actions will impair park resources. The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act as amended, begins with a mandate to conserve park resources and values. National Park

Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, will harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values. Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. An impact to any park resource or value may constitute impairment. An impact will be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Because there will be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Grand Canyon National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there will be no impairment of Grand Canyon National Park's resources or values as a result of implementation of the preferred alternative.

PUBLIC INVOLVEMENT

Notification of the initiation of this development planning effort was included in an April 2003 public scoping newsletter (A North Rim issue of the park's Uplift and Erosion newsletter) that was distributed to the full 280-person park compliance mailing list, which includes state, local and federal agencies, affiliated tribes, special interest groups and private individuals, and posted on the park's website. Recipients were asked to respond with any issues or concerns with the projects described and if they wished to remain on the mailing list for upcoming detailed information related to the development plan and other North Rim projects. A response from the Navajo Nation was received expressing interest in reviewing all environmental assessments and assessments of effect, requesting official correspondence from the park, and inquiring about projects that might occur within the cross-canyon corridor. Twenty-eight other responses were also received, expressing interest in the North Rim and requesting to remain on the mailing list. No comments specific to the preliminary proposal to prepare a development plan were received during this April 2003 scoping effort.

In April 2004, the second North Rim issue of the Uplift and Erosion newsletter was released. It described in detail the proposed actions included in the North Rim Development Plan and solicited issues and concerns with the proposal. This newsletter was sent to the established North Rim mailing list and was posted on the park's website. A separate scoping letter, describing the proposal and including a copy of the newsletter, was sent to all affiliated tribes, the State Historic Preservation Officer (SHPO), U.S. Fish and Wildlife Service (FWS), the North Kaibab Ranger District (Kaibab National Forest) and other interested and affected agencies and organizations. Seven responses to this scoping effort were received and are summarized in the EA on pages 8 – 10. The Park Service performed a content analysis on this information, information gained from internal scoping, and information gained from scoping with other agencies. From this effort, the Park Service did not identify any additional significant issues for analysis.

The EA was made available for public review and comment during a 30-day period ending 16 August 2005, through a combination of direct mailing, issuance of a press release and posting on the park's website. All persons on the established North Rim mailing list and interested and affected agencies, tribes and organizations received a copy of the EA during the public review period, including all those that commented during the scoping period. A flier was sent to the full 280-person park compliance mailing list, with notification that the EA was available for review.

Seven comment letters and/or e-mails were received and are summarized as follows: 1) Xanterra Parks and Resorts expressed support for the preferred alternative and requested that further consideration be given to providing additional food service in the General (Camper) Store and to providing Lodge check-in/check-out functions at the Visitor Center near the parking lot; 2) the Zuni Tribe recommended avoidance of all historic and traditional cultural properties and

requested to be kept informed regarding properties affiliated with the Zuni Tribe; 3) a private individual expressed support for the preferred alternative, requested that visitor cabins on the North Rim be refurbished and questioned if the proposed expansion of the Kaibab trailhead parking area is adequate; 4) an outdoor recreation coordinator/Leave No Trace educator requested consideration be given to implementing a transit system before visitation levels warrant a change; 5) a private individual expressed support for the preferred alternative, requested that the Greenway Trail allow for hikers to continue to have access to the group camping area and the Transept Trail, recommended additional social activities in the Lodge auditorium, expressed concern regarding the lack of adequate food service in the Lodge area and requested that food service be provided in the Camper Store; 6) the Sierra Club expressed support for many aspects of the preferred alternative but questioned whether NPS examined a full range of alternatives in the EA, particularly related to the Greenway Trail, raised concern regarding two interpretive signs currently installed on the North Rim and whether they meet the intent of the cultural/visual resource mitigation measures outlined in the EA, requested that no additional trailer spaces be provided for the trail ride concessionaire until an analysis of the mule ride concessionaire operation is conducted, and requested a wording change in the EA on page 17, and 7) Arizona Department of Environmental Quality provided recommendations regarding dust control during and after construction activities and the possibility of asbestos removal during building rehabilitation. Substantive comments are addressed in detail in the errata sheets attached to this document.

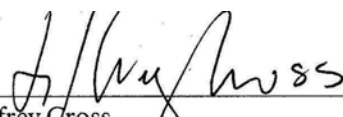
Consultation between the NPS and the State Historic Preservation Officer (SHPO) on the way in which the park will meet its Section 106 responsibilities for protection of cultural resources during site-specific project implementation of Development Plan components was completed with the finalization of a programmatic agreement on 6 September 2005. Consultation between the NPS and tribal groups occurred as part of public scoping, as described above, as part of review of the EA, as described above, and as part of the completion of the PA to guide continued Section 106 consultation and the cultural resource aspects of the project. All affiliated tribes with an interest in this project were asked if they will like to be a signatory on the PA. No tribes responded to the request to be a signatory on the PA, but the Zuni Tribe responded to the request for comments on the EA.


Consultation between the NPS and the United States Fish and Wildlife Service on this project is complete. USFWS concurred with the park's findings of effect to federally listed species in a letter of concurrence dated 26 July 2005.


CONCLUSION

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). Negative environmental impacts that could occur are negligible to moderate in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, known ethnographic resources, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that the project does not constitute a major federal action significantly affecting the quality of the human environment and an EIS will not be required for this project and thus will not be prepared.

Recommended:  9/6/05
Jeffrey Gross Date
Science Center Director, Grand Canyon National Park

Recommended:  9-7-05
Joseph F. Alston Date
Superintendent, Grand Canyon National Park

Approved:  9/10/05
Michael D. Snyder Date
Acting Intermountain Regional Director

ERRATA SHEET

North Rim Development Plan Grand Canyon National Park

The NPS received seven responses to a request for comments on the EA for the North Rim Development Plan (June 2005). The comment period ended 16 August 2005. An interdisciplinary team reviewed these responses to identify any substantive comments. Substantive comments were considered to be comments which:

- question, with reasonable basis, the accuracy of information in the EA.
- question, with reasonable basis, the adequacy of environmental analysis.
- present reasonable alternatives other than those presented in the EA.
- cause changes or revisions in the proposal.

Some comments were received that were considered substantive. These comments were reviewed in detail by the project interdisciplinary team. Substantive comments received are summarized below with the NPS response.

***Comment:* Further consideration should be given to expanded/improved food service opportunity at the General Store. Minimize the space allocated to gift-selling in the store and devote this space to food service.**

Response: Park staff acknowledges that food service availability on the North Rim is sometimes not adequate to meet demand during peak season. The preliminary proposal to swap the locations of the Café on the Rim and the saloon, both in the Lodge area, was developed so as to increase the seating capacity and food preparation capabilities of the café and thus increase food service in the Lodge area. Park staff is considering improvement of food service in the campground area, such as at the General (Camper) store. The park is exploring the feasibility and cost of such a venture. NPS is concerned that the indirect impacts of increasing food service in this area (increased staffing and increased employee housing and parking) would not be easily accommodated in the existing residential areas of the North Rim.

***Comment:* The EA proposes to relocate the saloon to the café and expand the restrooms in this area. This will result in inadequate food service to meet the needs of visitors.**

Response: As stated above, the proposal to relocate the saloon into the café and the café into the saloon was developed so as to increase the seating capacity and food preparation capabilities of the café. The preliminary proposal includes establishment of a kitchen behind the newly located café that would just serve the café. The seating capacity of the saloon in its current location is larger than the seating capacity of the café in its current location, so swapping the functions would create more seating in the café. Increasing the size of the restrooms would reduce the size of the available seating in the saloon, but this action, at least as initially explored, would not create a problem as the saloon rarely reaches full capacity in the evenings when demand is highest.

It is important to point out that the park is currently in the process of exploring options for improving visitor services on the North Rim, as part of development of a North Rim hospitality prospectus. Any preliminary proposals will need to be discussed further to determine feasibility, cost, and whether they would achieve the stated goals.

***Comment:* Further consideration should be given to providing the Lodge check-in/check-out processes at a Contact Station near the main parking lot. Closing the lodge entry road to vehicles inconveniences visitors who are forced to walk this extra distance to the Lodge to check-in and then return to the parking lot to retrieve baggage and locate their cabin. Establishing Lodge check-in near the parking lot would require the use of the existing Visitor Center for this function and would then require the construction of a new Visitor Center.**

Response: As stated in the June 2005 EA on page 23, NPS preliminarily explored the option to keep the visitor center (contact station) in its current location, construct a new visitor center in another location, and to use the existing visitor center building for Lodge check-in. The rationale for not considering this option further is described on page 23 as follows:

Keeping the building in its current location but using it for something else was also considered. To attempt to improve the lodge registration procedure, NPS considered moving the Lodge check-in function to this building. It is closest to the parking area and would be convenient to visitors and would expedite registering Lodge guests and getting them to their rooms, eliminating the existing need for guests to walk to the Lodge lobby, check-in, return to their cars, pick up luggage and walk to their cabins. However, even though this might provide a convenience for visitors, removing the hotel registration function from the historic Lodge was expected to result in an adverse impact to the operation of this historic landmark building. For this reason, this was dismissed from detailed analysis.

The EA describes in detail on pages 18 – 23, the preliminary consideration of a number of alternate locations for construction of a new visitor, with the reasoning behind their dismissal from detailed analysis. While NPS acknowledges that closure of the entry road to the Lodge to private vehicles does incur an inconvenience to visitors who are checking in, NPS believes that the improvements created by the proposal to reconfigure the Lodge parking area and the creation of a more pedestrian-friendly walkway from the parking area to the Lodge will benefit the overall experience of all visitors to this popular area, including those checking in and out of the Lodge. The protection of cultural resources is part of the mission of the National Park Service, as it is to also provide for visitor enjoyment. These needs have to be carefully balanced. Because the Grand Canyon Lodge is designated as a National Historic Landmark, the highest honor for a historic building, it must be afforded special protection. NPS did not consider further the action to remove the check-in function from the historic Lodge lobby for this reason. NPS contends that facilitating visitors who are checking in and checking out of the Lodge and having to maneuver to their cabins can be achieved through NPS and concessionaire actions to provide adequate information in advance, signage and adequate walkways and wayfinding and continuing the service currently in place where Lodge employees assist visitors to their cabins with their luggage.

Comment: If employees currently housed in the 9 Lodge cabins are relocated to the new dorm in the Concessionaire area and the cabins converted back into visitor lodging, the cabins should be refurbished by the Concessionaire, along with all other cabin accommodations in the North Rim.

Response: NPS agrees that the visitor cabins at the Lodge are in need of rehabilitation. NPS is considering including cabin rehabilitation in the upcoming North Rim hospitality prospectus. However, rehabilitation of historic structures needs to be done sensitively and typically incurs more cost than other buildings to be done appropriately. This cost may be reflected in increased room rates following rehabilitation. NPS anticipates continued analysis of this issue to firmly identify feasibility, cost and timing.

Comment: Congestion on the Lodge entry road up through the parking area should be alleviated so as to provide a safer access to the Lodge by pedestrians. Handicapped access should still be provided on the Lodge entry road.

Response: NPS agrees that congestion in this area needs to be alleviated and is listed as one of the objectives of the Development Plan (EA, pages 6 and 7). The proposal to reconfigure the Lodge road and parking area (as described on pages 47 – 49 of the EA) is designed to alleviate this problem and provide a safer means of access for those that arrive on tour buses and private vehicles. The proposal to construct a Greenway trail in the area would also provide a safer means of access for bicyclists and pedestrians in this area near the Lodge. As stated in the EA in the second paragraph on page 47, the existing accessible parking spaces in front of the Lodge lobby would remain for the time being and would be available on a case-by-case basis. In later design phases for the reconfigured parking area prior to implementation, determinations would be made regarding the best way to meet the needs of visitors and the current Americans with Disabilities Act standards in the design of the parking area and the designation of accessible parking spaces.

Comment: The proposed expansion of the Kaibab Trailhead may not be adequate and NPS should consider expanding the gravel road up to CC Hill to include additional parking.

Response: NPS has acknowledged that this parking area gets heavy use during peak periods and desires to increase the parking capacity, as stated on page 34 of the EA. NPS has determined that the proposed increase in space to accommodate an additional 17 vehicles should meet current demand. NPS did, however, preliminarily consider the option to create additional overflow parking on CC Hill and to use the road up to CC Hill for additional parking, but recognized that the level of ground disturbance required to achieve this was not justified at this time. The rationale for the dismissal of these two options is included on pages 18 – 19 of the EA and reprinted below:

The 1995 GMP recommends relocation of the parking area to the transit staging area on top of CC Hill. With the deferment of the implementation of the transit system, an interim remedy to the overflow conditions at the trailhead was considered. Options that were preliminarily considered but dismissed included the development of a small overflow satellite parking area on top of CC Hill, completely relocating the entire parking area to CC Hill, and designating the parking area day use only and providing for overnight parking in the campground parking area. Using CC Hill for parking was dismissed due to the substantial amount of earth work required to make the road from the parking area up to CC Hill passable by passenger vehicle and the amount of tree removal and new ground disturbance required on the top of the hill. Designating the parking area as day use only was dismissed because this would substantially inconvenience visitors using this trailhead for overnight trips into the canyon. Requiring visitors to park near the campground for these overnight stays would result in an additional 0.5 miles of hiking from their cars to get to the trailhead.

Comment: Consider implementing a transit system before visitation levels warrant a change. The transit systems at Zion National Park and Rocky Mountain National Park are successful examples of transportation systems that should be in use in all major national parks.

Response: NPS agrees that the implementation of transit systems at many parks has been a very successful program and has achieved the benefits of reduced vehicle congestion, vehicle emissions and created a positive visitor experience. Grand Canyon National Park is currently in the process of evaluating transportation improvements on the South Rim to address similar concerns. As described on page 9 and 18 of the EA, recent projections for visitation on the North Rim do not justify the conversion to a transit system on the North Rim for at least another 15 years. While implementing transit systems can result in positive changes to park resources and visitor experience over the long-term, they are also expensive to initiate, costly to operate and maintain, and can sometimes create resistance from visitors who tend to prefer using their private vehicles. NPS agrees that the initiation of a transit system on the North Rim may be necessary at some point in the future, but has determined that the possible benefits of initiating a transit system on the North Rim do not outweigh the costs, while visitation levels remain within current projections. NPS has determined that the other improvements, as outlined in the preferred alternative in the EA, including changes to parking areas and circulation patterns, would improve the existing situation without substantially impacting park resources or incurring exorbitant costs.

Comment: The proposed Greenway Trail should allow hikers to drop off in the existing “overflow” or group camping area and to keep the existing trail along the Transept to the lodge in place.

Response: Currently there are no plans to alter the alignment or designation of the existing Transept trail. Under implementation of the preferred alternative, hikers will still be allowed to “drop off” of the Greenway Trail at any location they choose, and use of the Transept Trail will not be altered. The Transept Trail is a foot trail only and there currently is no plan to alter it to accommodate wheel chairs, bicyclists or equestrians.

Comment: Expand the use of the Lodge auditorium to also include social activities for those who are waiting for dinner and/or interpretive information or ranger talks during the dinner hour in the Lodge lobby.

Response: The NPS continues to explore ways to improve visitor service and experience in the main Lodge. Any proposals, such as this one, will be considered within the restrictions of space, personnel, and other impacts.

Comment: The EA should evaluate another alternative to the current proposal for the nine-foot-wide Greenway Trail. NPS should include an analysis of a less extreme (narrower) version of the Greenway Trail. The EA does not make a clear case for this trail as proposed and does not explain why the existing Bridle Trail cannot be re-routed and resurfaced (maintaining its current width) to meet the need for handicapped accessibility and safe bicycle use.

Response: NPS has determined that implementation of the Greenway Trail would be in keeping with the rustic character of the North Rim, would not result in substantial impacts to park resources, and would achieve the goal of encouraging safe travel for non-motorized modes of transportation on the North Rim. The 1995 General Management Plan states that “A bike trail (separated from the road wherever possible and constructed outside the proposed wilderness boundary) will

be developed to link CC Hill, Bright Angel Point, and all overlooks on Walhalla Plateau (page 45).” The current Greenway Trail proposal is consistent with statement from the GMP.

According to the “Guide for the Development of Bicycle Facilities” (American Association of State Highway and Transportation Officials, or AASHTO, 1999), the recommended width for a two-directional shared use path is 10 feet. The guidelines support a reduced width of 8 feet if certain conditions are met (including good visibility for passing and expected low bicyclist and pedestrian use), and support an increased width of 12 feet or even 14 feet if substantial use by bicyclists, joggers, skaters and pedestrians is expected, steep grades, and/or large maintenance vehicles. These recommended widths are all in keeping with Americans with Disabilities Act (ADA) requirements for wheelchairs on trails (a minimum width of 5 feet is recommended so as to provide 30 inches of width for each of two wheelchairs side by side). NPS has discretion in the way in which it chooses to implement the 1999 AASHTO guidelines, depending on a variety of factors, including the potential for impacts to natural and cultural resources. For this segment of the Greenway Trail on the North Rim, 9 feet was selected as the maximum width and was analyzed as such in the EA. While the proposed Greenway Trail would be a two-directional, shared use path, NPS determined that a 10-foot width or greater would be excessive; that this segment of trail would not receive the high levels of use that would require a 10-foot-wide or greater trail.

However, the NPS, in the recent review of these guidelines to respond to this comment, acknowledges that an 8-foot-wide trail would be appropriate for this segment of trail; that the trail would meet the conditions under which the AASHTO standards allow for a reduced width from 10 feet to 8 feet. NPS acknowledges, after recent review of the guidelines that a 9-foot width is not necessary and that an 8-foot-wide trail would safely accommodate all users, factoring in the level of use and our desire to maintain the rustic character of the North Rim. This change, however, recognizes that the existing Bridle Trail varies in width from approximately 17 feet near the North Kaibab Trailhead to less than 4 feet just south of the Concessionaire Area. Designating a maximum width of 8 feet means that there would be no newly-constructed area of the trail that would have a width greater than 8 feet, but that there will be areas along the trail that will be less than 8 feet, in order to minimize the need to remove large trees and/or other factors to minimize disturbance to park resources. NPS does not intend, however, to reduce the existing Bridle Trail width if it is currently greater than 8 feet (as in the area near the trailhead).

NPS acknowledges that the EA should have analyzed, as part of the preferred alternative, a definitive maximum width of 8 feet and the text of the EA on page 49, last paragraph, has been changed, as follows:

Greenway Trail (Figure 21 and Figure 22). A North Rim segment of the Greenway Trail system (currently established on the South Rim) is proposed for Bright Angel peninsula. This approximately 2-mile long multi-use trail would be established between the North Kaibab Trailhead and the Lodge area, following the alignment of an existing trail (the Bridle Trail). The Bridle Trail (Figure 22) currently averages about 6 feet in width, although there are some areas, such as near the North Kaibab Trailhead where the width is as much as 17 feet wide, and other areas, such as near the Concessionaire area, where the width is as narrow as 4 feet. The Bridle Trail currently has an unimproved surface; it is essentially a social trail used by local residents and occasionally visitors in certain high use areas. The Greenway Trail would improve this existing trail, using its current alignment, and it would be designed for multiple uses including pedestrians, bicyclists and equestrians. It would be no more than 8 feet wide, which would equate to increasing the existing width up to approximately 2 additional feet in some areas. Reducing the existing width, in areas where it is currently greater than 8 feet, would not occur. In other words, no newly constructed trail segment would have a width greater than 8 feet, but if the existing width is already greater than 8 feet, efforts would not be used to reduce the existing width. Constructed trail width would also vary according to the terrain and the presence of trees and would be narrowed below 8 feet as needed in places to avoid having to remove trees. The trail would not be paved but a soil hardener would be used to provide a more even surface, minimize erosion and reduce the need for maintenance. The trail would be designed to meet current accessibility standards from the Headquarters Area to the Lodge Area. The existing steep section of trail from the North Kaibab Trailhead up to the headquarters area does not meet current accessibility standards.

The following paragraph, providing the rationale for the selected trail width, was added to the EA, starting on page 51, following the revised paragraph above:

Eight feet was selected as the appropriate width, following the “Guide for the Development of Bicycle Facilities” (American Association of State Highway and Transportation Officials, or AASHTO, 1999). These guidelines recommend 10 feet as the appropriate width for a two-directional shared use path. The guidelines support a reduced width of 8 feet if certain conditions are met (including good visibility for passing and expected low bicyclist and pedestrian use), and support an increased width of 12 feet or even 14 feet if substantial use by bicyclists, joggers, skaters and pedestrians is expected, steep grades, and/or large maintenance vehicles. These recommended widths are all in keeping with Americans with Disabilities Act (ADA) requirements for wheelchairs on trails (a minimum width of 5 feet is recommended so as to provide 30 inches of width for each of two wheelchairs side by side). For this segment of the Greenway Trail on the North Rim, 8 feet was selected as the maximum width for any newly constructed segment of trail. While the proposed Greenway Trail would be a two-directional, shared use path, NPS determined that a width greater than 8 feet would be excessive; that this segment of trail would not receive the high levels of use that would require a wider trail.

Two preliminary options considered during development of the Greenway proposal were not discussed in the EA but should have been, under the heading Alternatives Considered but Dismissed. This text has been added to the EA on page 24, as follows:

NPS preliminarily evaluated one option to construct several switchbacks in the steep area just south of the Concessionaire Area, between the Concessionaire Area and the Lodge. This option was eliminated from further consideration due to the excessive new ground disturbance and tree removal this would require. Another preliminary alternative to the multiple switchbacks was developed which included a road crossing just above the steep area and construction of the trail on the east side of the road instead, from this point south to the Lodge area. This option was also eliminated from further consideration when it was determined that there was not adequate room between the road and the canyon edge on the east side to accommodate the trail.

NPS did not evaluate other alternatives for the Greenway Trail in detail, and limited the analysis to the proposal described as part of the preferred alternative on pages 49 – 52 and the No Action alternative. This was due to the fact that no substantive issues were generated by NPS resource specialists with the proposed 9-foot width. Analyzing a width of less than 9 feet, when the trail averages about 6 feet in width (with some areas greater than 10 feet) is essentially an analysis of taking no action at this time, or the No Action alternative. As described in the EA on pages 49 – 52, the proposed trail will use the existing Bridle Trail alignment, will not require the removal of any trees greater than 12 inches dbh and will minimize the removal of even smaller trees, requiring removal of only a few small trees in just two areas. These provisions, along with not paving the trail, using only a soil hardener and only rock-lining the trail in areas that require it for safety, will insure that impacts to visual resources, the character of the landscape and natural and cultural resources are minimized. NPS disagrees that a trail with these design parameters would be similar to a road. Through this errata sheet, NPS agrees to changing the maximum width of the trail to 8 feet (instead of 9 feet), as documented above. This change will not result in impacts to park resources that would be different than those described for a 9-foot width in the EA. While the acreage of disturbance might be somewhat less than that calculated for a 9-foot width, decreasing the width by one foot would still be within the stated estimated level of ground disturbance in the EA of 2 – 3 acres.

Construction of a Greenway Trail, using the alignment of the Bridle Trail, is in keeping with recommendations in the Bright Angel Peninsula Cultural Landscape Report (Milner 2003). The widening of the trail up to a maximum width of 8 feet would not result in any disturbance to archeological resources and other mitigation measures are in place to reduce the likelihood of disturbance to other cultural resources, including continued consultation with the State Historic Preservation Officer. The following location in the text that refers to a 9-foot width (Table 2, page 64) will be changed to reflect a maximum width of 8 feet. All other aspects of the analysis for the Greenway Trail will remain the same.

Comment: The existing interpretive sign at Bright Angel Point and at Fire Point do not meet the intent of mitigation measures for cultural/visual resources on page 60 of the EA. The sign at Bright Angel Point should be replaced with a small unobtrusive name plate at Bright Angel Point itself and the existing sign, or something similar could be provided in the Visitor Center. The Fire Point sign should be moved or removed.

Response: As mentioned in the EA on page 49, 5th paragraph:

New interpretive signs would be installed along area trails, guided by a sign plan. Details are not yet available for this aspect of the plan. Locations and types of signs are not yet determined. For this reason, additional compliance (NEPA and NHPA at a minimum) will likely be necessary as sign locations and details are developed by the park. This aspect of the proposal will not be analyzed further in this document.

This alludes to the development of a sign plan to guide any future installation of new interpretive signs. NPS intends to use such a sign plan to guide any future installations, but also to re-evaluate existing area signs. The two signs that are mentioned above would be appropriate to evaluate as part of the development of a sign plan for the North Rim. This is, however, outside the purview of the Development Plan, as analyzed in the EA, but is appropriate for the upcoming process to develop a sign plan. Mitigation measures included in the EA on page 60 will be considered as the sign plan is developed.

Comment: The Backcountry Management Plan should address the possibility that mule rides on the North Rim would be discontinued or reduced, due to the conflicts between mule riders and hikers on the North Kaibab Trail. The North Rim Development Plan EA should not assume increased mule service until the analysis of the operation is conducted as part of the Backcountry Plan. No further development, such as the proposed additional trailer spaces for the mule ride concessionaire, should occur until this analysis is complete.

Response: The proposed allocation of trailer space in the expanded Norton Court assumes that mule operations stay at current levels, and does not assume increased mule service. It does not assume any increases in employees. Table 9 on page 125 of the EA illustrates that there would be no increase in the number of bed spaces (the number of bed spaces, 13, is the same as the number of existing employees) for the trail rides concessionaire. The proposal allows for a trailer pad site for each employee. A minor correction has been made to the text of the EA on page 44, 1st paragraph, to reduce the possibility for misinterpretation. The word ‘additional’ has been removed from the sentence that discusses trailer sites for the trail ride concessionaire, as follows:

This redesign and expansion would provide 18 sites for NPS employees and partners who use their personal travel trailers for summer housing, 8 South Rim duty-stationed employees temporarily working on the North Rim, and 8 sites for the trail ride concessionaire.

The evaluation of the carrying capacity of the North Kaibab Trail was an issue that came up in initial discussions among park staff during the developing planning effort. This is discussed on page 8 of the EA, as follows:

The park is intending to initiate the revision of the park’s 1988 Backcountry Management Plan in the next year. The carrying capacity for mules on the North Kaibab Trailhead was a subject that came up internally during the planning process for the North Rim Development Plan. While this topic is outside the scope of the Development Plan, it is within the purview of the backcountry management planning effort and has been listed as a preliminary issue under that effort. Developing carrying capacity for any type of recreational use in the backcountry is a logical inclusion in the backcountry planning effort and an evaluation of stock use is expected to be included in the revised backcountry management plan, when that effort is initiated.

NPS agrees that the evaluation of mule use on the North Kaibab is a logical inclusion in the backcountry management planning effort. This concern has been forwarded to the Backcountry management planning team for their consideration.

Comment: On page 17 of the EA it states, “If changes during final site design are not consistent with the intent and effects of the selected alternative, then additional environmental compliance would be conducted as appropriate.” This should be changed to read “If changes during final site design are significantly different from the selected alternative then additional environmental compliance would be conducted as appropriate.”

Response: This sentence on Page 17 of the EA was modified to read: “If changes during final site design are significantly different from, or are not consistent with, the intent and effects of the selected alternative, then additional environmental compliance would be conducted as appropriate.”

Comment: The following minor revisions to text in the EA were suggested during a review of the EA by park staff, as follows:

- **Page 45, 3rd paragraph:** Insert ‘to persons with disabilities’ following ‘accessible’ at the end of the third sentence. This reads as the though the auditorium is boarded up.
- **Page 45, 4th paragraph:** Replace ‘working with the hospitality concessionaire, Xanterra Parks and Resorts’ with ‘exploring the feasibility of...’ This is more accurate.
- **Page 47, 5th paragraph:** Insert ‘any needed’ prior to the ‘rehabilitation work’ in the last sentence on the page. This is more accurate.

Response: These minor changes to the text have been made on pages 45 and 47, as follows:

- Page 45, 3rd paragraph – The sentence now reads: “ The lodge auditorium is currently not accessible to persons with disabilities.”
- Page 45, 4th paragraph – The sentence now reads: “The park is currently exploring the preliminary feasibility and cost of the following actions:”
- Page 47, 5th paragraph – The sentence now reads: “It is possible that any needed rehabilitation work on the 9 visitor cabins and the motel basement remodels would begin as early as 2006/2007 and will likely be complete in 1 – 2 seasons.”

Comment: The asbestos National Emission Standards for Hazardous Air Pollution (NESHAPS) regulation may apply to the projects to improve employee housing and the use of various historic and non-historic buildings. The owner or operator of a demolition or renovation must inspect the building in advance for the presence of asbestos. Notification requirements and work practice standards are triggered if certain threshold amounts would be disturbed.

Response: A mitigation measure has been added to the EA on page 61, under air quality, to reflect the above comment, as follows:

- *Contact the Arizona Quality Division, Compliance Section, of the Arizona Department of Environmental Quality if asbestos is present in any building that would be rehabilitated to ensure compliance with the asbestos National Emission Standards for Hazardous Air Pollution (NESHAPS).*